Notes on Central American *Scutellaria* (Lamiaceae)

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ABSTRACT. *Scutellaria ebracteata,* in section *Cardinalis* Epling, from Nicaragua, and *S. tenuipetiolata* in section *Uliginosae* Epling, from Costa Rica, are described, and identification keys to section *Cardinalis* as found in Honduras, Nicaragua, and Costa Rica and section *Uliginosae* as found in Nicaragua and Costa Rica are provided. The identity of *Scutellaria nicaraguensis* Sessé & Mociño is discussed, and the type locality of *S. purpurascens* var. *heterophylla* Bentham is clarified and its affinity to other taxa is considered.

In the course of preparing treatments of Lamiaceae for the floras of Nicaragua and Costa Rica, specimens representing two new species of *Scutellaria* were found, significant range extensions of other species were encountered, and two poorly understood names were clarified.

Scutellaria ebracteata A. Pool, sp. nov. TYPE: Nicaragua. Depto. de Matagalpa: Macizos de Peñas Blancas, SE side, drainage of Quebrada El Quebradon, slopes N and W of Hacienda San Martín, ca. 13°14–15′N, 85°38–39′W, 1000–1400 m, 18–20 Jan. 1982 (fl), *W. D. Stevens with P. Moreno & T. Elmquist 21115* (holotype, MO; isotype, HNMN not seen). Figure 1.

Species nova *Scutellariae glabrae* E. Leonard similis sed ab ea corolla purpurea monate, tubi cum galea 2.7–3.1 mm longa, tubo anguste infundibulari non saccato differt.

Weak shrub (or herb), 1–1.5 m, young branches with dense small, curving hairs. Leaves wide-elliptic, elliptic-oblong, or slightly pandurate, short-acuminate to obtuse at apex, rounded to cordate and often slightly asymmetrical at base, 7.7–13.5 cm long, 2.6–7 cm wide, margin sub-entire to serrate, adaxial surface glabrous, abaxial surface glabrous or with minute hairs on primary and secondary veins; medial petioles 1.5–5 cm long, shorter to longer than adjacent internodes. Inflorescence a terminal raceme, 4.5–10 cm long; flowers 15–25, loosely spiraled, pendulous; bracts deciduous prior to anthesis, pedicel 2–3 mm long; calyx 3.5–4.5 mm long, minutely puberulent or glabrous, scutellum 1.2–2 mm high; corolla reddish-purple, tube with galea 2.7–3.1 cm long, tube narrow-funnelform, arcuate, non-saccate, 1–2 mm wide at base to 5–7 mm wide at apex, lower lip 3–5 mm long. Fruiting calyx with lower lip to 5 mm long, scutellum to 4 mm high; nutlets (immature?) tan, nearly smooth.

Paratypes. NICARAGUA. **Jinotega:** Macizos de Peñas Blancas, along trail between finca of Socorro Mejia and finca of Luis Manzanares, ca. 13°16–17′N, 85°40–41′W, 1350–1650 m, cloud forest on gentle to steep slopes, 14 Jan. 1979 (fl buds), *W. D. Stevens 11339* (HNMN not seen, MO); Fila Piedra Pelona, al S del Cerro Kilambé, 13°34′N, 85°41′W, 1500–1665 m, bosque enano, 28 Mar. 1981 (young fr), *P. Moreno 7798* (HNMN not seen, MO); San Ramón, lado E de las faldas del Cerro Kilambé, 13°34′N, 85°40′W, 800–900 m, 24 Mar. 1981 (fl), *P. Moreno 7409* (HNMN not seen, MO); Cerro Kilambé, falda E del Pico Piedra Pelona, 13°34′N, 85°40′W, 1300–1400 m, bosques húmedos, 28 Mar. 1981 (fl), *P. Moreno 7784* (HNMN not seen, MO); Kilambé, Cerro San Pedro, 13°36′N, 85°39′W, 600–800 m, 25 Mar. 1981 (fl buds, young fr), *P. Moreno 7535* (HNMN not seen, MO); Flor de Liz, al W del Cerro Kilambé, 13°35′N, 85°40′W, 700–900 m, 24 Mar. 1981 (fl, fr), *P. Moreno 7430* (MO). **Zelaya:** Cerro Saslaya a unos 25 km al oeste de Siuna, 1200 m, Oct. 1977 (fl), *A. J. Ferguson 2* (MO); Cerro Saslaya, 20 km W of Siuna, 1100–1400 m, along eastern ridge of mountain, cloud forest, 5 May 1977 (fl buds), *D. Neill 1832* (MO).

Epling (1942) treated all *Scutellaria* species with large (tube with galea 16–60 mm) red flowers, known at that time from Central America south of Mexico, as members of section *Cardinalis* Epling. Paton (1990) treated the same species as *Scutellaria* sect. *Scutellaria* species-groups "speciosa" (in part) and "costaricana." These species are all large herbs or weak shrubs, often straggling, with leaves glabrous or sparingly hirsute above, and racemes with flowers spirally arranged in the axils of the deciduous to long persistent bracts, the corollas large and showy, orange-red, scarlet or bright red, and often arcuate. Epling recognized the five species treated here, except *S. ebracteata.* However, the species are difficult to separate and have been treated in various ways in modern Central American floras. *Flora of Guatemala* (Standley & Williams, 1973) treated *S. isocheila* Donnell Smith and *S. glabra* E. Leonard as synonyms of *S. longifolia* Bentham. *Flora of Costa Rica* (Stand-

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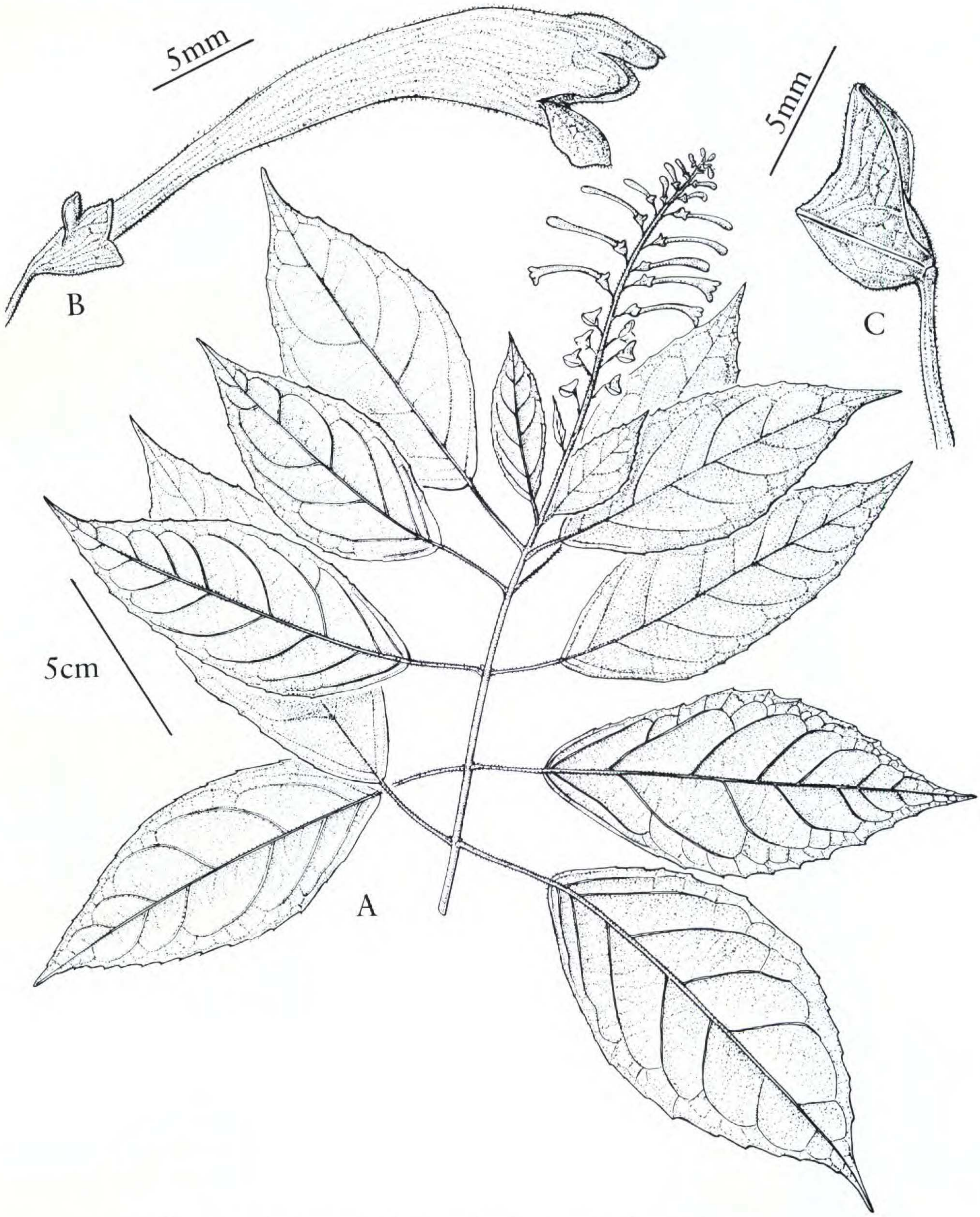

Figure 1. *Scutellaria ebracteata* A. Pool. —A. Habit. —B. Flower. —C. Fruiting calyx.

ley, 1938) recognized *S. glabra* but treated *S. isocheila* as a synonym of *S. longifolia*. To clarify my concepts, a key to the species of *S.* sect. *Cardinales* found in Honduras, Nicaragua, and Costa Rica is provided. *Scutellaria longifolia*, as here circumscribed, is restricted to southwestern Mexico and western Guatemala. It is recognized by having lanceolate leaves with cuneate (to rarely rounded and shortly decurrent) bases, and flowers that are ascending to spreading and spirally arranged in the axils of caducous bracts, with orange corollas of medium size (tube with galea 25–32 mm) with straight (to slightly sigmoid) tubes that are not saccate at the base. *Scutellaria hookeri* Epling is now known from Costa Rica, based on *L. O. Williams et al. 28585* (F) collected in the Cordillera de Talamanca. *Scutellaria hookeri*, known then only from Peru, was treated by Epling as a member of section *Coccineae* Epling (*Scutellaria* sect. *Scutellaria* species-group "speciosa" (in part) of Paton, 1990). It differs from members of section *Cardinales* only in having pilose to villous hairs on the abaxial leaf surface; *S. hookeri* is treated here as a member of section *Cardinalis* and included in the key.

KEY TO THE SPECIES OF *SCUTELLARIA* SECT. *CARDINALES* IN HONDURAS, NICARAGUA, AND COSTA RICA

1a. Inflorescence bracts deciduous before or at anthesis; corolla tubes saccate above base or not; leaf bases cordate, subcordate, or rounded.
2a. Corolla tube with galea 46–60 mm, orange-red with yellow or orange lobes; flowers erect, congested, and corymbiform; known from Costa Rica and Panama . . . . *S. costaricana* H. Wendland (including *S. argentata* E. Leonard)
2b. Corolla tube with galea 16–31 mm, dark red or reddish purple; flowers spreading to pendent, loosely spiraling.
3a. Corolla reddish purple, tube with galea 27–31 mm, tube not saccate; endemic to Nicaragua . . . . . *S. ebracteata* A. Pool
3b. Corolla dark red, tube with galea 16–23 mm, tube saccate on one side at 3–4 mm above base; known from Costa Rica and Panama . . . . . . *S. glabra* E. Leonard
1b. Bracts persistent into and beyond fruiting; corolla tubes not saccate above base; leaf bases attenuate to rounded or cordate.
4a. Inflorescence without glandular-capitate hairs; corolla tube with galea 20–34 mm, bright pink; leaves with attenuate bases, glabrous above; endemic to Costa Rica . . . . *S. isocheila* Donnell Smith
4b. Inflorescence with glandular-capitate hairs; corolla tube with galea 19–40 mm, rose or orange-red to bright red; leaves with rounded to cordate bases, scattered hirsute above (at least along margin).
5a. Corolla tube with galea 19–26 mm, rose to red; calyx long-villous; leaves with subcordate to cordate bases and with long (to ca. 1 mm) curly or wavy hairs on surface below; known from Costa Rica, Colombia, and Peru . . . . *S. hookeri* Epling
5b. Corolla tube with galea 32–40 mm, orange-red to bright red; calyx short-hispid; leaves with rounded bases and with short straight hairs on surface below; known from Guatemala, Belize, and Honduras . . . . *S. inflata* Epling

Scutellaria tenuipetiolata A. Pool, sp. nov. TYPE: Costa Rica. Limón Province: Cantón de Talamanca Amubri, camino entre Amubri y Soki, siguiendo el Río Ñabri hacia Alto Soki, 9°29′50″N, 82°59′10″W, 150 m, 1 July 1989 (fl, young fr), *Gerardo Herrera 3101* (holotype, MO; isotypes, CR not seen, F). Figure 2.

Species nova *Scutellariae purpurascente* Swartz similis sed ab ea petiolis medianis internodiis longioribus, foliis basi revera cordata, sinu usque ad ca. 3 mm profundo, bracteis estipitatis, corolla pallidiore, tubo albido, labiis azureis ad violaceis differt.

Small perennial herb with thickened fascicled roots, usually with several stems arising from a small caudex, stems densely puberulent. Leaves ovate, bluntly acute at apex, shallowly cordate at base with sinus to 3 mm deep, 3.5–5.6 cm long, 2–4 cm wide, margin crenulate (sinuate), adaxial surface nearly glabrous with scattered, coarse, jointed hairs, abaxial surface puberulent on primary and secondary veins; medial petioles longer than adjacent internodes, 2.5–4 cm long, less than 1 mm wide. Inflorescence a terminal raceme, 3.5–5.5 cm long, 4–12-flowered, flowers spiraled to subopposite at a node; rachis, bracts, pedicels, and calyces puberulent; bract persistent, elliptic, 2–3 mm long, exstipitate; pedicel 1–2.5 mm long; calyx 2.5–3 mm long, scutellum 1.5–2 mm high; corolla with white tube and blue to purple lips, tube with galea 14–16 mm long, tube 1 mm wide at base to 3 mm wide at apex, lower lip 3–4 mm long. Fruiting calyx with lower lip to 4 mm long, scutellum to 5 mm high; nutlets brown, smooth to sub-papillate.

Scutellaria tenuipetiolata is found in wet, weedy areas.

Paratypes. COSTA RICA. **Limón:** Cordillera de Talamanca, Cantón de Matina, 200 m aguas abajo de la confluencia de Quebrada Cañabral con Río Barbilla, margen derecha, siguiendo el curso de la Quebrada Camagre, 10°00′10″N, 83°25′30″W, 100 m, 5 Nov. 1988 (fl), *G. Herrera 2283* (CR not seen, F, MO); near the Río Catarata (Río Sand Box) in the hills between BriBri on the Río Sixaola and the Caribbean coastal plain, 9°37′N, 82°49′W, 50–100 m, 28–29 Nov. 1975 (fl bud, fr), *R. Baker & W. Burger 39* (F, MO); arriba de la catarata del Río Sand Box, Talamanca, 200 m, 17 July 1982 (fr), *J. Gomez-Laurito 8732* (F); entre Limón et María, Sep. 1899 (fr and fl), *H. Pittier 16013* (K not seen, US).

All the species of *Scutellaria* with small (tube with galea 11–18 mm) bluish or purplish flowers found in Nicaragua and Costa Rica are treated by Epling (1942) as members of section *Uliginosae* Epling (*Scutellaria* sect. *Scutellaria* "species-group uliginosa" of Paton, 1990). They are all small herbs (generally less than 50 cm tall), with fascicled-thickened roots and several stems arising from a small caudex or slightly elongated rhizome. The leaves are thinly hirsute above, with stout-jointed hairs, and puberulent at least on the veins below. The flowers are spiraled to sub-verticillate in the axils of bracts on a short raceme with the corollas small, purple or blue, or white with blue or purple lips.

Epling recognized two species of *Scutellaria* sect. *Uliginosae* in Costa Rica. He included the newly described *S. tenuipetiolata*, as represented by *Pit-*

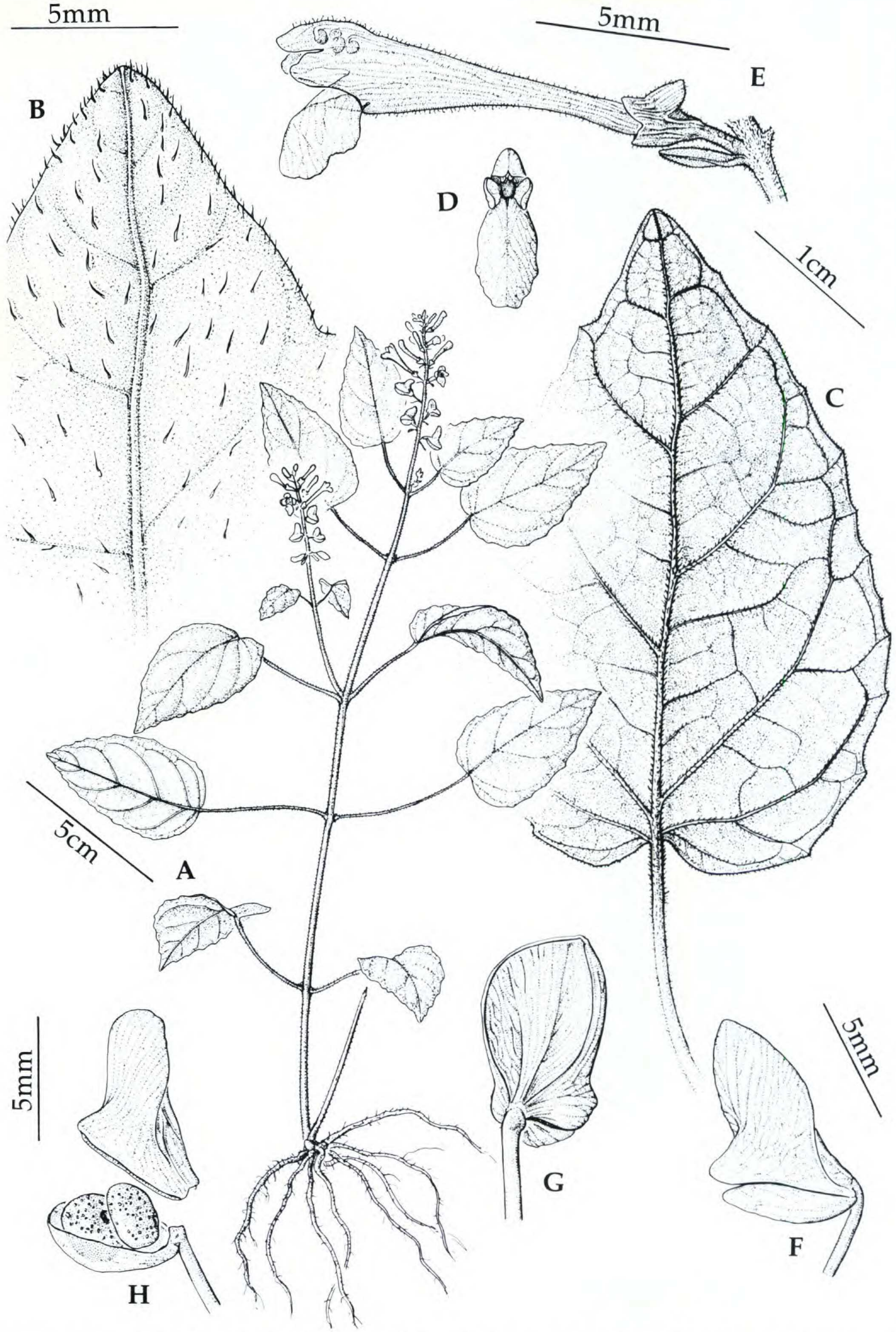

Figure 2. *Scutellaria tenuipetiolata* A. Pool. —A. Habit. —B. Adaxial leaf surface. —C. Abaxial leaf surface. —D. Flower, front view —E. Flower, lateral view. —F. Fruiting calyx, lateral view. --G. Fruiting calyx, back view. —H. Fruiting calyx with nutlets.

tier 16013, in his concept of *S. purpurascens* Swartz. This group was not known from Nicaragua. Four species are now known from Costa Rica, while one, *S. galerita* Epling, has been found in Nicaragua.

Epling treated *Scutellaria purpurascens* var. *heterophylla* Bentham as a synonym of *S. guatemalensis* E. Leonard, but it is here maintained in *S. purpurascens.* However, insufficient material of *S. purpurascens* over its entire range has been examined to determine whether a varietal distinction is warranted. *Scutellaria guatemalensis* differs from *S. purpurascens* in its exstipitate bracts and dense, relatively long hairs on stems, leaf abaxial surface, and calyx. It is not known south of Guatemala. Epling may have been misled into believing that the holotype of *S. purpurascens* var. *heterophylla, Friedrichsthal s.n.* (K), was from modern-day Guatemala. Most Friedrichstahl specimens are labeled as from Guatemala; only the original set retained at W indicate actual collection locality and number. Examination of the holotype, the Friedrichsthal collections at W, and a photocopy of Friedrichsthal's fieldnotes suggests that the holotype of *S. purpurascens* var. *heterophylla* is a duplicate of *Friedrichsthal 1299* (W), collected at San José, Costa Rica.

Scutellaria orichalcea Donnell Smith was placed by Epling in *Scutellaria* sect. *Pallidiflorae* Epling, based on the color of the corolla, white or white with lips yellowish green or bluish to purplish tinted; it is here treated as a member of section *Uliginosae.* Specimens of *S. orichalcea* from the north of Nicaragua are found from 150 to 1000 m and have corollas 19–24 mm long, that are white or white with yellow-green lips. Collections from Costa Rica are found at and above 1400 m and have slightly smaller corollas, 15–19 mm long, that are white with bluish or purplish lips or tints. If further investigation confirms these observations, recognition of the Costa Rican entity as a distinct subspecies might be recommended.

KEY TO THE SPECIES OF *SCUTELLARIA* SECT. *ULIGINOSAE* IN NICARAGUA AND COSTA RICA

1a. Leaves with bases cordate; medial petioles generally longer than adjacent internodes.
  2a. Inflorescence with some glandular-capitate hairs; leaves deeply cordate (sinus 5–10 mm); petioles 1.2–2 mm wide . . . . *S. galerita* Epling
  2b. Inflorescence without glandular-capitate hairs; leaves shallowly cordate (sinus 1.5–3 mm); petioles 0.3–0.75 mm wide . . . . *S. tenuipetiolata* A. Pool
1b. Leaves with bases cuneate to truncate; medial petioles shorter than adjacent internodes.
  3a. Corolla red-purple (blue); racemes with flowers in many-flowered verticels (especially dense at apex); bracts stipitate; leaves ovate, less than two times as long as wide . . . . *S. purpurascens* Swartz
  3b. Corolla white with bluish, purplish, or yellow-greenish lips or tints; racemes with flowers spiraling or opposite; bracts exstipitate; leaves lanceolate, two or more times as long as wide . . . . *S. orichalcea* Donnell Smith

Neither Leonard (1927) nor Epling (1942) treated the name *Scutellaria nicaraguensis,* described by Sessé and Mociño in *Flora Mexicana* (1894), as from "Legione" (equivalent to León, Nicaragua, according to McVaugh, 1977). No illustrations or specimens bearing this name have been located. The description is more compatible with *Ocimum campechianum* P. Miller than with any species of *Scutellaria* known from Central America or expected to be found in the dry forests in the area of León; I therefore suggest that synonymy.

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